

1 What is claimed is:

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3 1. A method of monitoring by a monitoring system a data system  
4 among a plurality of data systems connected to a user system among  
5 a plurality of user systems all of which systems are interconnected  
6 through a network, the method comprising the steps of,  
7 receiving search criteria from the user system,  
8 retrieving content data from the data system,  
9 repeating the retrieving step at regular intervals,  
10 determining matches for each of the retrieving steps when the  
11 content data matches the search criteria at each of the regular  
12 intervals, and  
13 reporting the matches to the user system.

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15 2. The method of claim 1 wherein,  
16 the content data is web content data,  
17 the data systems are web servers storing the web content data,  
18 the network is the internet, the web server having a web site  
19 location identified by a uniform resource locator (URL) that  
20 indicates the web content data,  
21 the user system comprises a web browser for communication with  
22 the monitoring system over the internet, and  
23 the monitoring system is a web monitoring server for receiving  
24 the search criteria from the user browser and for accessing the web  
25 content data of the web server.

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1       3. The method of claim 1 wherein,  
2           the search criteria comprises a sleep interval indicating a time  
3           duration between the regular intervals.  
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6       4. The method of claim 1 wherein,  
7           the search criteria indicates keywords,  
8           the matches are keywords matches.  
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11      5. The method of claim 1 wherein,  
12           the search criteria comprises keywords, and  
13           the search criteria comprises a Boolean expression,  
14           the matching step determines when the content data matches the  
15           Boolean expression of the keywords as Boolean keyword matches.  
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18      6. The method of claim 1 wherein,  
19           content data is a character string comprising text words,  
20           the search criteria comprises a sleep interval indicating a  
21           time duration between the regular intervals,  
22           the search criteria comprises keywords, and  
23           the matches are keyword matches to the text words.  
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2     7. The method of claim 1 wherein  
3                 content data is a character string comprising text words and  
4                 formatting characters and strings of spaces,  
5                 the search criteria comprises a sleep interval indicating a  
6                 time duration between the regular intervals and comprises keywords,  
7                 and  
8                 the matches are keyword matches to the text words,  
9                 the method further comprising the steps of,  
10                 stripping the text words from the character string, the  
11                 matching step matches the keywords to the text words for keywords  
12                 matches.

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15     8. The method of claim 7 wherein the stripping step,  
16                 the character string contain formatting characters that are  
17                 removed form the character string leaving the text words.  
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1       9. The method of claim 1 wherein,  
2              content data is a character string comprising text words and  
3              formatting characters and strings of spaces,  
4              the search criteria comprises a sleep interval indicating a  
5              time duration between the regular intervals and comprises keywords  
6              and comprises a Boolean expression, and  
7              the matches are Boolean keyword matches of the Boolean  
8              expression of the keywords to the text words,  
9              the matching step matches the Boolean expression of the  
10             keywords to the text words for the Boolean keywords matches,  
11             the method further comprising the steps of,  
12             stripping the text words from the character string into a  
13             formatted string,  
14             storing the formatted string for each of the retrieval steps  
15             when the formatted string has changed since a last one of the  
16             retrieval steps,  
17             counting the number of keywords in the formatted string for  
18             each of the retrieval steps for providing keyword counts, and  
19             the reporting step reports for each of the retrieval step when  
20             the formatted string has changed and when the keywords counts have  
21             changed in the content data since a previous one of the retrieval  
22             steps.

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1       10. The method of claim 1 wherein,

2              the content data is top level content data,

3              the top level content data is a character string comprising

4       text words and formatting characters and strings of spaces and

5       links for linkage to linked content data, the linked content data

6       also comprising text words and formatting characters and strings of

7       spaces, the linked content data being at a linked depth from the

8       top level content data for each linkage through a link to another

9       one of the linked content data,

10             the search criteria comprises a sleep interval indicating a

11       time duration between the regular intervals and comprises keywords

12       and comprises a crawling depth for retrieving the top level content

13       data and linked content data to the linked depth of linked content

14       data indicated by the crawling depth,

15             the matches are keyword matches to the text words,

16             the method further comprising the steps of,

17             stripping the text words from the character string for the top

18       level content data into a top level formatted string,

19             determining a change in the top level formatted string since a

20       previous one of the retrieval steps,

21             storing the top level formatted string when there is a change

22       in the top level formatted string since the previous one of the

23       retrieval steps,

24             determining a change in a number of keywords in the top level

25       content data, the matching step matches the keywords to the text

26       words in the top level formatted string,

27             stripping the text words from the character string for the

28       linked content data to the crawling depth, and

1       counting the number of keywords in the formatted strings for  
2 the top level content data and the linked content data to the  
3 crawling depth when there is a change in the number of keyword  
4 matches in the top level content data for providing keyword counts,  
5 the reporting step reports the keywords counts.

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11. The method of claim 1 wherein,  
2       the content data is top level content data,  
3       the top level content data is a character string comprising  
4 text words and formatting characters and strings of spaces and  
5 links for linkage to linked content data, the linked content data  
6 also comprising text words and formatting characters and strings of  
7 spaces, linked content data being at a linked depth from the top  
8 level content data for each linkage through a link to another one  
9 of the linked content data,  
10      the search criteria comprises a sleep interval indicating a  
11 time duration between the regular intervals and comprises keywords  
12 and comprises a Boolean expression and comprises a crawling depth  
13 for retrieving the top level content data and linked content data  
14 to the linked depth of linked content data indicated by the  
15 crawling depth,  
16      the matches are Boolean keyword matches of the Boolean  
17 expression and the keywords to the text words,  
18      the method further comprising the steps of,  
19       stripping the text words from the character string for the top  
20 level content data into a top level formatted string,  
21       determining a change in the top level formatted string since a  
22 previous one of the retrieval steps,  
23       storing the top level formatted string when there is a change  
24 in the top level formatted string since the previous one of the  
25 retrieval steps,  
26       determining a change in a number of keywords in the top level  
27 content data, the matching step matches the keywords to the text  
28 words in the top level formatted string,

1       stripping the text words from the character string for the  
2 linked content data to the crawling depth, and  
3       counting the number of keywords in the formatted strings for  
4 the top level content data and the linked content data to the  
5 crawling depth when there is a change in the number of keyword  
6 matches in the top level content data for providing keyword counts,  
7 the reporting step reports the keywords counts.

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1       12. A method of monitoring by a monitoring server web content data  
2       of a web server system among a plurality of web servers connected  
3       to a user system among a plurality of user systems having  
4       respective user browsers, all of which are interconnected through  
5       the internet using internet protocol addresses, the web content  
6       data indicated by a URL a portion of which indicates the web server  
7       the method comprising the steps of

8             receiving search criteria from the user system, the search  
9       criteria comprises keywords and comprises a crawling depth for  
10      retrieving top level content data and linked content data to the  
11      linked depth of the linked content data indicated by the crawling  
12      depth,

13             retrieving top level content data and the linked content  
14       data from the data system, the top level content data is a  
15       character string comprising text words and formatting characters  
16       and strings of spaces and links for linkage to linked content data,  
17       the linked content data also comprising text words and formatting  
18       characters and strings of spaces,

19             determining matches when the top level content data matches  
20       the search criteria, and

21             reporting the top level matches to the user system.

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23       13. The method of claim 12, wherein the determining step further  
24       determines keyword matches to the linked content data.

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26       14. The method of claim 12, wherein the determining step further  
27       determines keyword count of the keywords in the linked content  
28       data.

1       15. A method of monitoring by a monitoring server web content data  
2       of a web server system among a plurality of web servers connected  
3       to a user system among a plurality of user systems having  
4       respective user browsers, all of which are interconnected through  
5       the internet using internet protocol addresses, the web content  
6       data indicated by a URL a portion of which indicates the web server  
7       the method comprising the steps of,  
8             receiving search criteria from a user system, the search  
9       criteria comprising a URL to be monitored, a sleep interval,  
10      keywords and a Boolean expression,  
11             retrieving the web content data indicated by the URL from the  
12      web server,  
13             repeating the retrieving step at regular intervals indicated by  
14      the sleep interval,  
15             determining Boolean keyword matches of the web content data  
16      after the retrieving step for the Boolean expression and keywords,  
17      and  
18             reporting to the user system of the Boolean keyword matches.  
19      the content data is top level content data, the top level content  
20      data is a character string comprising text words and formatting  
21      characters and strings of spaces and links for linkage to linked  
22      content data, the linked content data also comprising text words  
23      and formatting characters and strings of spaces, linked content  
24      data being at a linked depth from the top level content data for  
25      each linkage through a link to another one of the linked content  
26      data.

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1       16. The method of claim 15 wherein,  
2           the search criteria comprises a sleep interval indicating a  
3       time duration between the regular intervals and comprises keywords  
4       and comprises a Boolean expression and comprises a crawling depth  
5       for retrieving the top level content data and linked content data  
6       to the linked depth of linked content data indicated by the  
7       crawling depth,  
8           the matches are Boolean keyword matches of the Boolean  
9       expression and the keywords to the text words,  
10          the method further comprising the steps of,  
11           stripping the text words from the character string for the top  
12       level content data into a top level formatted string,  
13           determining a change in the top level formatted string since a  
14       previous one of the retrieval steps,  
15           storing the top level formatted string when there is a change  
16       in the top level formatted string since the previous one of the  
17       retrieval steps,  
18           determining a change in a number of keywords in the top level  
19       content data, the matching step matches the keywords to the text  
20       words in the top level formatted string,  
21           stripping the text words from the character string for the  
22       linked content data to the crawling depth, and  
23           counting the number of keywords in the formatted strings for  
24       the top level content data and the linked content data to the  
25       crawling depth when there is a change in the number of keyword  
26       matches in the top level content data for providing keyword counts,  
27       the reporting step reports the keyword counts.  
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1   17. The method of claim 16 wherein the reporting step comprises the  
2   steps of,

3         providing the user with a notification through the internet of  
4   keyword matches,

5         storing keywords counts for the keywords for the respective top  
6   level web content data and the linked content data,

7         receiving a display request from the user system through the  
8   internet, and

9         communicating through the internet to the user system display  
10   data for displaying on the user system indication of the keyword  
11   counts.

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13   18. The method of claim 16 wherein the formatting characters  
14   comprises HTML tag characters.

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